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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,938	06/27/2003	Chan-Jung Park	1594.1258	4442
21171	7590	11/03/2006	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			JOLLEY, KIRSTEN	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/606,938

Applicant(s)

PARK ET AL.

Examiner

Kirsten C. Jolley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-7,9,19-23 and 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23 and 25 is/are allowed.
- 6) ☒ Claim(s) 1,4-7,9 and 19-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. The 35 USC 112, 1<sup>st</sup> and 2<sup>nd</sup> paragraph rejections set forth in the prior Office action have been withdrawn in response to Applicant's amendments to the claims and arguments.
2. Applicant's arguments filed August 7, 2006 regarding the 35 USC 103(a) rejections have been fully considered but they are not persuasive. Applicant argues that Kropf teaches nano-sized materials in hygiene products such as diapers, tampons, pantyliners, and the like, which is a woven or nonwoven surface coated with modified nanoparticles wherein a portion of the woven or nonwoven surface is in contact with the skin to provide a moisture- and odor-absorption action, and that Kropf does not teach or suggest application to a filter body or home appliance. The Examiner disagrees. Merriam-Webster's Collegiate Dictionary, Tenth Edition defines "filter" as "a porous article or mass through which a gas or liquid is passed to separate out matter in suspension." While Kropf et al. does not refer to the woven or nonwoven surface as a "filter," Kropf et al. states in paragraph [0055] that "the middle section of a top sheet (uppermost nonwoven of a diaper) is hydrophilic in order to be able to absorb the liquid and to convey it to the lower layers." Thus Kropf et al. teaches that its nonwoven sheet in a diaper, for example, is a porous article through which a liquid is passed. It is well known that solid matter/particulates, i.e., solid waste, is captured in the uppermost layer of a diaper and not passed through the porous top sheet to the underlying layers. Thus it is the Examiner's position that the nonwoven diaper product of Kropf et al. meets the limitation of a filter body.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Throughout claim 9, the claim requires application to a “filter body of a home appliance body,” however lines 16-17 require “wherein the body is a home appliance selected from among refrigerators, washing machines and air conditioners.” It is not clear whether the claim does not in fact read on application to a filter body at all, or whether lines 16-17 are intended to merely further limit the types of home appliance body on which the coating may be applied. Because there is no antecedent basis for “the body”, this claim is confusing. For the purpose of examination, the claim has been interpreted as being limited to application on a home appliance body only (of the type claimed), and not on a filter body, because that is what appears to be intended. However, the Examiner notes that if claim 9 is intended to be broad enough to read on use on a filter body as well, then claim 9 will be rejected over Kropf et al. for similar reasons as claim 1.

Claim 9 also contains improper Markush language. The phrase “selected from among” should be --selected from the group consisting of--.

***Claim Rejections - 35 USC § 103***

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 4-7, and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kropf et al. (US 2005/0234416 A1)

The claims remain rejected for the same reasons set forth in the prior Office action, as well as for the reasons discussed above in section 2.

#### ***Allowable Subject Matter***

7. Claims 23 and 25 are allowed. As to claim 23, the prior art does not teach or fairly suggest the claimed coating method, wherein the deposition includes an ion-adsorption reduction method, in which only silver is selectively attached onto the body by use of electrolysis of silver solution. As to claim 25, the prior art does not teach or fairly suggest the claimed coating method, wherein the nano-sized metal particles selected from the claimed group are applied to a surface of a copper or stainless steel filter.

8. Claim 9 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. The prior art does not teach or fairly suggest the claimed coating process for use on a home appliance body selected from among refrigerators, washing machines and air conditioners.

#### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kirsten C. Jolley whose telephone number is 571-272-1421. The examiner can normally be reached on Monday to Wednesday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Kirsten C Jolley  
Primary Examiner  
Art Unit 1762

kcj